



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,366	04/12/2006	Byung-moo An	1114.004	8238
21176	7590	06/10/2008	EXAMINER	
SUMMA, ALLAN & ADDITON, P.A.			RIPLEY, JAY R	
11610 NORTH COMMUNITY HOUSE ROAD				
SUITE 200			ART UNIT	PAPER NUMBER
CHARLOTTE, NC 28277			3679	
			MAIL DATE	DELIVERY MODE
			06/10/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/595,366	AN, BYUNG-MOO	
	Examiner	Art Unit	
	JAY R. RIPLEY	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 February 2008.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-7 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-7 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 06 September 2007 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____. | 6) <input checked="" type="checkbox"/> Other: <u>Attachments A-G</u> . |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/14/2008 has been entered.

Claim Objections

Claim 1 is objected to since the recitation in line 10 of "locking holes provided on the bent surface" should be --locking holes provided in the bent surface--, since "holes" are "in" structures and "holes" are not "on" structures.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claim 1, it is recited in line 9, “a coupling part having a bent surface at each of both ends of the body part” (emphasis added). There is a lack of antecedent basis for the emphasized structure in the claim, since nowhere in the claim is it defined as to what constitutes an “end” of the “body part”. It appears that the Applicant may intend the “opposing axial edges” to be the “ends” of the “body part”. The Examiner notes that the phrase “the both ends of the body part” is recited in claim 1, lines 11-12.

In regard to claim 1, it is recited in lines 18-22, “the reinforcing unit further defining an axis transverse to the longitudinal axis that extends between the pair of opposing axial edges of the reinforcing unit body part, the reinforcing unit being gradually reduced in thickness along its entire transverse axis from its center to both axial edges” (emphasis added). The Examiner notes that an “axis” is a line that extends between two points and that lines possess no curvature. As such, the emphasized recitation is either inaccurate and/or misdescriptive. As can be observed in marked Figure 8 of the instant application, see Attachment A, the disclosed “reinforcing unit” is generally curved in aspect. However, the noted recitation appears to placing the limitation that the “reinforcing unit” is sufficiently planar in aspect such that the “reinforcing unit” is “gradually reduced in thickness along its entire transverse axis from its center to both axial edges”, the “transverse axis” being a line. It appears the Applicant is attempting to place the limitation that the “reinforcing unit” is “gradually reduced in thickness along its” circumferential direction “from its center to both axial edges” or some such.

In regard to claim 1, it is recited in line 21, “the reinforcing unit being gradually reduced in thickness along its entire transverse axis from its center to both axial edges”. The use of the adjective “its” results in a lack of clarity, since it is unclear as to which structure “its” is referring

to. If the Applicant intends the adjective "its" to refer to the "reinforcing unit" or the "transverse axis of the reinforcing unit", the Applicant should simply so state.

In regard to claim 3, it is recited in lines 2-7, "upper and lower parts of the body, relative to the central longitudinal axis thereof, differ in inner and outer diameters from each other... each of the upper and lower parts having a constant diameter" (emphasis added). It is unclear if the "a constant diameter" is one of the "inner and outer diameters" or yet another diameter.

In regard to claim 4, it is recited in lines 3-4, "a sealing unit provided against the interior surface of each of the body part and the reinforcing unit". It is unclear if the Applicant is placing the limitation of a one "sealing unit" provided for each of the "body part" and the "reinforcing unit", i.e., two (2) "sealing units", or if the Applicant is placing the limitation of a single "sealing unit" against both the "body part" and the "reinforcing unit". Further, it is unclear as to what constitutes an "interior surface". Are the "interior" surfaces the surfaces between the "body part" and the "reinforcing unit" or are the "interior" surfaces the radially interior surfaces of both the "body part" and the "reinforcing unit"?

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

As best understood, claims 1, 4/1, 5/4/1, 6/1, and 7/1 are rejected under 35 U.S.C. 102(b) as being anticipated by Turner et al (U.S. 3,487,856).

In regard to claims 1, 4/1, 5/4/1, 6/1, and 7/1, Turner et al disclose a pipe joint, comprising:

a body part (part 16 as observed in Figure 1, see Attachment B) provided by rolling a planar material to form a cylindrical structure, the body part having a pair of opposing circumferential edges (part 16 is a “flexible metal band” and therefore has “a pair of opposing circumferential edges” - see column 2, lines 40-46) and a pair of opposing axial edges (noted in Figure 1, see Attachment B), the axial edges of the body part defining a longitudinal slot, the body part defining a central longitudinal axis extending between the pair of opposing circumferential edges (the invention of Turner et al concerns a pipe clamp, therefore the invention has such a “a central longitudinal axis”), the body part further defining an axis transverse to the central longitudinal axis that extends between the pair of opposing axial edges of the body part (there are a infinity of axis that extend between any two edges, any of which axis may be arbitrarily chosen to meet the claim limitation);

a coupling part (part 14 as observed in Figure 1, see Attachment B) having a bent surface at each of both ends of the body part (the “bent” surfaces noted in Figure 1, see Attachment B), with a plurality of locking holes provided on the bent surface of the coupling part (column 2, lines 43-44, discloses “the lugs being held together by tightening bolts” which indicates multiple bolt with a requisite number of multiple holes in which the bolts are within);

locking means (bolts 18 as observed in Figure 1, see Attachment B) tightened into the locking holes to couple the both ends of the body part to each other (the bolts are “tightening bolts”, see column 2, lines 43-44);

and a reinforcing unit (figure 2B as observed in Attachment B) comprising a separate curved plate (part 28a as observed in Figure 2B in Attachment B), the reinforcing unit having a pair of opposing circumferential edges and a pair of opposing axial edges (the "reinforcing unit" has a length and width, therefore the reinforcing unit posses such edges), the reinforcing unit defining a longitudinal axis extending between the pair of opposing circumferential edges (there are a infinity of axis that extend between any two edges, any of which axis may be arbitrarily chosen to meet the claim limitation), the reinforcing unit further defining an axis transverse to the longitudinal axis that extends between the pair of opposing axial edges of the reinforcing unit body part (there are a infinity of axis that extend between any two edges, any of which axis that are transverse to the arbitrarily chosen "longitudinal axis" may be arbitrarily chosen to meet the claim limitation), the reinforcing unit being gradually reduced in thickness along its entire transverse axis from its center to both axial edges (as observed in Figure 2B, see Attachment B) to be in close contact with an inner surface of the body part;

wherein at least one edge of the pair of opposing circumferential edges of the body part and at least one edge of the pair of opposing circumferential edge of the reinforcing unit are substantially coplanar with respect to one another (since "substantially" is a subjective term, the respective circumferential edges of the invention of Turner et al are "substantially coplanar");

a sealing unit provided against the interior surface of each of the body part and the reinforcing unit to provide a sealing effect after joining pipes (as observed in Figure 1, see Attachment B);

a close contact means (art 22 as observed in Figure 1, see Attachment B, and column 2, lines 57-62) to increase a contact force at a contact surface thereof, the close contact means

spaced apart and extending longitudinally along at least a portion of the surface of the sealing unit in contact with the inner surface of the body part (the noted "close contact means" is spaced apart from the surface of the "sealing unit" in contact with the inner surface of the body part and the noted "close contact means" extends along" the referenced surface - see U.S. 3,487,856 Figures 4-5);

each of the coupling parts comprises a bending part (as observed in Figure 1, see Attachment B) to be attached to the body part (the Examiner notes that the phrase "to be attached to the body part" indicates something that is to occur at some future time and is not a positive functional requirement, only requiring to ability to somehow "be attached to the body part");

the reinforcing unit further comprises a positioning means extending in a longitudinal direction along at least a portion of an outer surface of the reinforcing unit and having a stepped shape (the "positioning means" noted in Figure 2B, see Attachment B, is "along" an outer surface of the noted "reinforcing unit and has a "stepped shape"), the positioning means facilitating the horizontal positioning of the reinforcing unit against the body part relative to the central longitudinal axis of the body part (the noted "positioning mans" does not prohibit "horizontal positioning", therefore the structure meets the claim limitation) when the stepped shape of the positioning means correspondingly engages and extends into at least a portion of the longitudinal slot of the body part (the use of the conjunctive "when" in claim 7, line 7, makes the recitation in claim 7, lines 5-9, of "the positioning means... part" a conditional limitation; as such, since the noted "stepped shape" is capable of being so positioned, the limitations are met).

The Examiner notes that the product-by-process recitation of "provided by rolling a planar material to form a cylindrical structure" (emphasis added) in line 2 has little affect the

patentability of the product itself. A comparison of the recited process with the prior art processes does NOT serve to resolve the issue concerning the patentability of the product. *In re Fessman*, 489 F2d 742, 180 U.S.P.Q. 324 (CCPA 1974). Whether a product is patentable depends on whether it is known in the art or it is obvious, and is not governed by whether the process by which it is made is patentable. *In re Klug*, 333 F2d 905, 142 U.S.P.Q. 161 (CCPA 1964). In an ex parte case, product-by-process claims are not construed as being limited to the product formed by the specific process recited. *In re Hirao et al.*, 535 F2d 67, 190 U.S.P.Q. 15, see footnote 3 (CCPA 1976). The prior art of Turner et al has a body part that is in the form of a cylindrical structure and, therefore, the claim limitation is met.

As best understood, claims 1, 2/1, 4/1, 4/2/1, 5/4/2/1, 5/4/1, 6/1, and 6/2/1, are rejected under 35 U.S.C. 102(b) as being anticipated by Tetzlaff (U.S. 2,341,828).

In regard to claims 1, 2/1, 4/1, 4/2/1, 5/4/2/1, 5/4/1, 6/1, and 6/2/1, Tetzlaff discloses a pipe joint, comprising:

a body part (noted in Figure 5, see Attachment C) provided by rolling a planar material to form a cylindrical structure, the body part having a pair of opposing circumferential edges (noted in Figure 3, see Attachment C) and a pair of opposing axial edges (noted in Figure 1, see Attachment C), the axial edges of the body part defining a longitudinal slot, the body part defining a central longitudinal axis (indicated in Figure 1, see Attachment C) extending between the pair of opposing circumferential edges, the body part further defining an axis transverse to the central longitudinal axis that extends between the pair of opposing axial edges of the body

part (there are a infinity of axis that extend between any two edges, any of which axis may be arbitrarily chosen to meet the claim limitation);

a coupling part having a bent surface at each of both ends of the body part (one of which is shaded in Figure 5, see Attachment C), with a plurality of locking holes provided on the bent surface of the coupling part (each noted “coupling part” has two holes to allow the common bolt, i.e. “locking means”, to transverse the “bent surface”);

locking means (the bolt as observed in Figure 5, see Attachment C) tightened into the locking holes to couple the both ends of the body part to each other;

and a reinforcing unit (Figure 6, sere Attachment C) comprising a separate curved plate, the reinforcing unit having a pair of opposing circumferential edges and a pair of opposing axial edges, the reinforcing unit defining a longitudinal axis extending between the pair of opposing circumferential edges, the reinforcing unit further defining an axis transverse to the longitudinal axis that extends between the pair of opposing axial edges of the reinforcing unit body part (there are a infinity of axis that extend between any two edges, any of which axis may be arbitrarily chosen to meet the claim limitation), the reinforcing unit being gradually reduced in thickness along its entire transverse axis from its center to both axial edges to be in close contact with an inner surface of the body part (as observed in Figure 6, the “reinforcing unit” has a gradually reduced thickness from an arbitrarily chosen “center” to the “reinforcing unit’s axial edges);

wherein at least one edge of the pair of opposing circumferential edges of the body part and at least one edge of the pair of opposing circumferential edge of the reinforcing unit are

substantially coplanar with respect to one another (as observed in Figure 3, see Attachment C, and the Examiner notes that “substantially” is a subjective term);

a stop means (noted in Figure 6, see Attachment C) having a stepped shape, the stop means extending along at least a portion of one edge of the pair of opposing circumferential edges of the reinforcing unit.

a sealing unit (noted in Figure 1, see Attachment) provided against the interior surface of each of the body part and the reinforcing unit to provide a sealing effect after joining pipes;

a close contact means (the relative rigidity of the centrally located pipe 17 as observed in Figure 1, see Attachment C) to increase a contact force at a contact surface thereof, the close contact means spaced apart and extending longitudinally along at least a portion of the surface of the sealing unit in contact with the inner surface of the body part (the pipe 17 is spaced apart from the surface of the “sealing unit” in contact with the inner surface of the body part and the noted “close contact means” extends along” the referenced surface);

each of the coupling parts comprises a bending part (noted in Figure 5, see Attachment C) to be attached to the body part.

The Examiner notes that the product-by-process recitation of “provided by rolling a planar material to form a cylindrical structure” (emphasis added) in line 2 has little affect the patentability of the product itself. A comparison of the recited process with the prior art processes does NOT serve to resolve the issue concerning the patentability of the product. *In re Fessman*, 489 F2d 742, 180 U.S.P.Q. 324 (CCPA 1974). Whether a product is patentable depends on whether it is known in the art or it is obvious, and is not governed by whether the process by which it is made is patentable. *In re Klug*, 333 F2d 905, 142 U.S.P.Q. 161 (CCPA

1964). In an ex parte case, product-by-process claims are not construed as being limited to the product formed by the specific process recited. *In re Hirao et al.*, 535 F2d 67, 190 U.S.P.Q. 15, see footnote 3 (CCPA 1976). The prior art of Tetzlaff has a body part that is in the form of a cylindrical structure and, therefore, the claim limitation is met.

As best understood, claims 1, 6/1, and 7/1, are rejected under 35 U.S.C. 102(b) as being anticipated by Dominguez (U.S. 5,010,626).

In regard to claims 1, 6/1, and 7/1, Dominguez discloses a pipe joint, comprising:
a body part (noted in Figure 1, see Attachment D) provided by rolling a planar material to form a cylindrical structure, the body part having a pair of opposing circumferential edges (noted in Figure 2, see Attachment D) and a pair of opposing axial edges (noted in Figure 1, see Attachment D), the axial edges of the body part defining a longitudinal slot, the body part defining a central longitudinal axis extending between the pair of opposing circumferential edges (lightly drawn in Figure 1, see Attachment D), the body part further defining an axis transverse to the central longitudinal axis that extends between the pair of opposing axial edges of the body part (there are a infinity of axis that extend between any two edges, any of which axis may be arbitrarily chosen to meet the claim limitation);

a coupling part (one of the “coupling parts” shaded in Figure 2, see Attachment D) having a bent surface at each of both ends of the body part, with a plurality of locking holes provided on the bent surface of the coupling part (as can be observed in Figure 1, see Attachment D, the coupling parts have two holes each to allow the bolt 9 to pass through);

locking means (the bolt observed in Figure 1, see Attachment D) tightened into the locking holes to couple the both ends of the body part to each other;

and a reinforcing unit (part 7 as observed in Figures 1 and 2) comprising a separate curved plate (as observed in Figure 2, see Attachment D) the reinforcing unit having a pair of opposing circumferential edges (noted in Figure 1, see Attachment E) and a pair of opposing axial edges (the observed "axial edge" shaded in Figure 2, see Attachment E ; the Examiner notes that the embodiment of part 7 shown in Figure 1 has "axial edges" as plainly observed), the reinforcing unit defining a longitudinal axis extending between the pair of opposing circumferential edges (there are a infinity of axis that extend between any two edges, any of which axis may be arbitrarily chosen to meet the claim limitation), the reinforcing unit further defining an axis transverse to the longitudinal axis that extends between the pair of opposing axial edges of the reinforcing unit body part (there are a infinity of axis that extend between any two edges, any of which axis may be arbitrarily chosen to meet the claim limitation), the reinforcing unit being gradually reduced in thickness along its entire transverse axis from its center to both axial edges (as plainly observed in Figure 2, see Attachment E, part 7 tapers from a center to the indicated "axial edges") to be in close contact with an inner surface of the body part;

wherein at least one edge of the pair of opposing circumferential edges of the body part and at least one edge of the pair of opposing circumferential edge of the reinforcing unit are substantially coplanar with respect to one another (as plainly observed in Figure 1, see Attachment D);

wherein each of the coupling parts comprises a bending part (noted in Figure 2, see Attachment D) to be attached to the body part; the reinforcing unit further comprises a positioning means (noted in Figure 1, see Attachment E) extending in a longitudinal direction (the noted “positioning means” has a dimension in the “longitudinal direction” and therefore extends in the longitudinal direction) along at least a portion of an outer surface of the reinforcing unit and having a stepped shape (as observed in Figure 4 and Figure 2, the “positioning means” has a “stepped shape”, since a “stepped shape” merely requires a relatively abrupt change in relative height), the positioning means facilitating the horizontal positioning of the reinforcing unit against the body part relative to the central longitudinal axis of the body part when the stepped shape of the positioning means correspondingly engages and extends into at least a portion of the longitudinal slot of the body part (the noted “positioning means” extends into the longitudinal slot as observed in Figure 2, see Attachment E)

The Examiner notes that the product-by-process recitation of “provided by rolling a planar material to form a cylindrical structure” (emphasis added) in line 2 has little affect the patentability of the product itself. A comparison of the recited process with the prior art processes does NOT serve to resolve the issue concerning the patentability of the product. *In re Fessman*, 489 F2d 742, 180 U.S.P.Q. 324 (CCPA 1974). Whether a product is patentable depends on whether it is known in the art or it is obvious, and is not governed by whether the process by which it is made is patentable. *In re Klug*, 333 F2d 905, 142 U.S.P.Q. 161 (CCPA 1964). In an ex parte case, product-by-process claims are not construed as being limited to the product formed by the specific process recited. *In re Hirao et al.*, 535 F2d 67, 190 U.S.P.Q. 15,

see footnote 3 (CCPA 1976). The prior art of Dominguez has a body part that is in the form of a cylindrical structure and, therefore, the claim limitation is met.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

As best understood, claims 1 and 3/1 are rejected under 35 U.S.C. 102(e) as being anticipated by Vogel et al (2003/0052236).

In regard to claim 1 and 3/1, Vogel et al discloses a pipe joint, comprising:
a body part (observed in Figure 1C, see Attachment F) provided by rolling a planar material to form a cylindrical structure, the body part having a pair of opposing circumferential edges (as observed in Figure 1A, see Attachment F) and a pair of opposing axial edges (as observed in Figure 1B, see Attachment F), the axial edges of the body part defining a longitudinal slot, the body part defining a central longitudinal axis extending between the pair of opposing circumferential edges (the noted axis observed in Figure 1C, see Attachment F), the body part further defining an axis transverse to the central longitudinal axis that extends between the pair of opposing axial edges of the body part (there are a infinity of axis that extend between any two edges, any of which axis may be arbitrarily chosen to meet the claim limitation);

a coupling part having a bent surface (one of which is shaded in Figure 1A, see Attachment F) at each of both ends of the body part, with a plurality of locking holes provided on the bent surface of the coupling part (the holes the bolts 34 extend through as observed in Figures 1A and 1B, see Attachment F);

locking means (bolts 34 as observed in Figures 1A and 1B, see Attachment F) tightened into the locking holes to couple the both ends of the body part to each other;

and a reinforcing unit (part 28 as observed in Figures 1B, see Attachment F, and Figure 6C, see Attachment G) comprising a separate curved plate, the reinforcing unit having a pair of opposing circumferential edges (as observed in Figure 6C, see Attachment G) and a pair of opposing axial edges (as observed in Figure 6C, see Attachment G), the reinforcing unit defining a longitudinal axis extending between the pair of opposing circumferential edges (since a plethora of axis extend between the two noted “circumferential edges, any of which may be arbitrarily chosen, the limitation is met), the reinforcing unit further defining an axis transverse to the longitudinal axis that extends between the pair of opposing axial edges of the reinforcing unit body part (there are a infinity of axis that extend between any two edges, any of which axis may be arbitrarily chosen to meet the claim limitation), the reinforcing unit being gradually reduced in thickness along its entire transverse axis from its center to both axial edges (the center of the “reinforcing unit” being shaded, the structure is reduced in thickness from its center to both axial edges as observed in Figure 6C) to be in close contact with an inner surface of the body part;

wherein at least one edge of the pair of opposing circumferential edges of the body part and at least one edge of the pair of opposing circumferential edge of the reinforcing unit are

substantially coplanar with respect to one another (as observed in Figure 1A, the respective edges are “substantially coplanar”);

wherein the body part is stepped around a predetermined portion thereof (the stepped body portion observed in Figure 1A, see Attachment F) so that upper and lower parts of the body part, relative to the central longitudinal axis thereof, differ in inner and outer diameters from each other, the upper part (the “upper body part” noted in Figure 1A, sere Attachment F) defined by an area between one of the circumferential edges of the body part and the stepped portion, and the lower part (the “lower body part” noted in Figure 1A, sere Attachment F) defined by an area between the other circumferential edge of the body part and the stepped portion, each of the upper and lower parts having a constant diameter and defining substantially concentric, graduated parts such that the constant diameter of one part is greater than the constant diameter of the other part (the recited concentricity observed in Figure 1A, see Attachment F).

The Examiner notes that the product-by-process recitation of “provided by rolling a planar material to form a cylindrical structure” (emphasis added) in line 2 has little affect the patentability of the product itself. A comparison of the recited process with the prior art processes does NOT serve to resolve the issue concerning the patentability of the product. *In re Fessman*, 489 F2d 742, 180 U.S.P.Q. 324 (CCPA 1974). Whether a product is patentable depends on whether it is known in the art or it is obvious, and is not governed by whether the process by which it is made is patentable. *In re Klug*, 333 F2d 905, 142 U.S.P.Q. 161 (CCPA 1964). In an ex parte case, product-by-process claims are not construed as being limited to the product formed by the specific process recited. *In re Hirao et al.*, 535 F2d 67, 190 U.S.P.Q. 15,

see footnote 3 (CCPA 1976). The prior art of Vogel et al has a body part that is in the form of a cylindrical structure and, therefore, the claim limitation is met.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4/3/1, 5/4/3/1, and 6/3/1 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turner et al (U.S. 3,487,856) as applied to claims 1, 4/1, 5/4/1, 6/1, and 7/1, above, in view of Vogel et al (2003/0052236).

Turner et al disclose the claimed invention except for the body part being stepped around a predetermined portion thereof so that upper and lower parts of the body part, relative to the central longitudinal axis thereof, differ in inner and outer diameters from each other, the upper part defined by an area between one of the circumferential edges of the body part and the stepped portion, and the lower part defined by an area between the other circumferential edge of the body part and the stepped portion, each of the upper and lower parts having a constant diameter and defining substantially concentric, graduated parts such that the constant diameter of one part is greater than the constant diameter of the other part. Vogel et al teach a pipe clamp, i.e., a “pipe connection”, with a body part having a stepped portion between substantially concentric, constant diameter upper and lower parts to connect two pipes that use a lap joint at the pipe juncture (see above 35 U.S.C. § 102 rejection of claim 1 and claim 3/1 over Vogel et al for the

structural particulars of the prior art of Vogel et al; as to the reason Vogel et al use the stepped shape, see paragraph 0002, lines 2-10). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the pipe joint of Turner et al with the body part having a stepped portion between substantially concentric, constant diameter upper and lower parts as taught by Vogel et al to connect two pipes that use a lap joint at the pipe juncture.

Response to Arguments

Applicant's arguments with respect to claims 1-7 have been considered but are moot in view of the new ground(s) of rejection. New grounds of rejection over the prior art of Dominguez (U.S. 5,010,626), Tetzlaff (U.S. 2,341,828), Turner et al (U.S. 3,487,856), and Vogel et al (2003/0052236) was necessitated due to the following amended claims recitations: claim 1, lines 20-22, “the reinforcing unit... part”; claim 1, line 25, “one another”; claim 3, lines 3-7, “relative to the central... portion; claim 4, line 3, “against the interior surface”; claim 7, line 6, “against the body... of”; claim 7, line 8, “correspondingly engages and extends into”. See rejections above for the specifics of the rejections.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Graham et al (U.S. 3,487,856), Thompson (U.S. 4,364,588), Cassel (U.S. 4,813,720), Protas et al (U.S. 7,052,052), Chambers et al (U.S. 3,439,945), Risley et al (U.S. 3,151,632),

Gould et al (U.S. 3,680,180), Huslander et al (U.S. 3,848,638), and Montgomery (U.S. 4,705,078).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAY R. RIPLEY whose telephone number is (571)272-7535. The examiner can normally be reached on Monday through Friday, 1:30 P.M. - 10:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jay R Ripley/
Examiner, Art Unit 3679
02 JUN 2008

/Daniel P. Stodola/
Supervisory Patent Examiner, Art Unit 3679